

Insectary Notes

September/October 2009

From the Editor



Why do I worry? I wondered out loud what to put in the newsletter. Next thing I knew I had maps for the jack pine budworm and balsam fir sawfly surveys, "what to watch for: the winter edition," and an update from the tick survey.

The fall and winter months provide lots of information as we finish up the spring and summer surveys and head into the overwintering surveys.

'Til next time,

Jacqui
Editing ... a Rewording Activity

Say What and Quotes . . .

Drive carefully! Remember, it's not only a car that can be recalled by its maker. -Anon.

Some cause happiness wherever they go; others, whenever they go. - O. Wilde

The advantage of a bad memory is that one enjoys several times the same good things for the first time. - F. Nietzsche

Nothing is foolproof . . . to a sufficiently talented fool. -Unk.

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Everyone is entitled to be stupid, but some abuse the privilege. - Unk.

Sarcasm helps keep you from telling people what you really think of them. - Unk.

If you think things can't get worse it's probably only because you lack sufficient imagination. - Unk.

Knowledge is realizing that the street is one-way, wisdom is looking both directions anyway. - Unk.

Provincial Entomologist's Overview . . What's the Buzz?

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Frozen flakes freely falling forecasts . . WINTER !

What to Watch For: the Winter Edition

Forest insects that are indigenous to colder climates have evolved and adapted to survive extended periods of cold. Unlike mammals, insects are exothermic which means that they lack an internal regulating process for temperature control. Rather, internal temperatures are dictated by the external temperatures. For those insects who do not migrate, they must ensure bodily fluids do not freeze. Two common methods are: freezing

avoidance (generally the northern hemisphere) and tolerance of freezing (generally the southern hemisphere). In freezing avoidance, the insect finds a dry overwintering site where they are protected from the external environment. Freezing tolerance allows the insect to survive if some of the body tissues become frozen for short periods of time by employing various biochemical strategies.

Signs and symptoms of some forest pests are still visible during the winter. So, if you're out in your woodlot or checking the trees in your yard, be on the lookout for . . .

Look for Eggs

Eggs laid singly or en mass can be visible on needles, trunks, and branches. Removal is the key strategy. For example, egg masses of the gypsy moth laid on the trunk (Fig. 1) can be scraped off and placed in vegetable oil for a couple of days before disposing. Ensure you remove the entire egg mass; it's easily broken into pieces. The forest tent

caterpillar lays eggs in bands around twigs (Fig. 2). Remove them and destroy the bands of eggs by boiling or burning. Eggs of the balsam fir sawfly (Fig. 3) are laid singly within a needle. Remove and destroy the needle if possible. A word of caution, sawfly eggs within the needle closely resemble rusts and casts so ensure you have that semicircle shape.



Fig. 1 Gypsy moth egg mass (reduced). Photo credit NSDNR

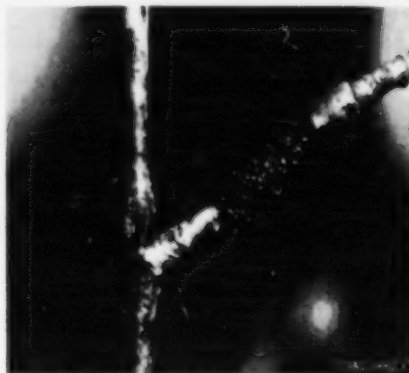


Fig. 2 Forest tent caterpillar egg band (enlarged).

Photo credit S. Katovich

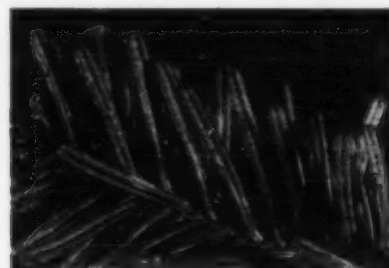


Fig. 3 Balsam fir sawfly egg niches (enlarged).

Photo credit T. Arcand

Look for Holes

Beetles tend to overwinter under the bark or in the wood. Entrance holes are key visual signs. The size of the hole matters. For example, the hole for the invasive brown spruce longhorn beetle is 4-6 mm wide and may appear to be D-shaped (Fig. 4) whereas the hole for our native spruce beetle is approximately 1 mm in diameter. Another difference between the BSLB and the spruce beetle is that a tree attacked by the BSLB is not known to

produce pitch tubes (Fig. 5). Also watch the woodpeckers, for they are after these larvae. Peel back the bark to expose the feeding galleries (Fig. 6). In the case of the spruce beetle, cut down the infected tree and destroy it. You can submerge the infected tree in water for three days to drown the beetle or you can chip, hog, or burn the infected tree.



Fig. 4 Brown spruce longhorn beetle exit holes (enlarged).

Photo credit T. Prest

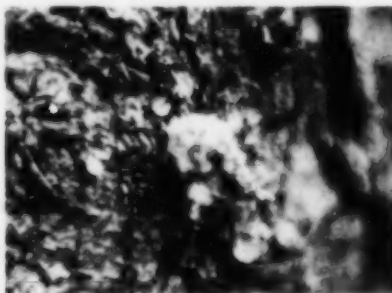


Fig. 5 Spruce beetle pitch tube (enlarged).

Photo credit NSDNR

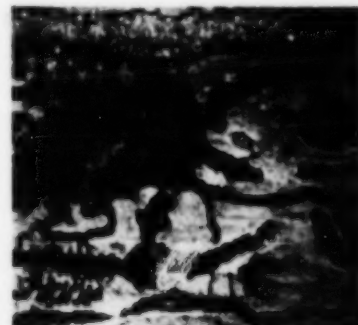


Fig. 6 Spruce beetle galleries (enlarged).

Photo credit S. Tunnock

Look for Malformations

Ever notice that things just don't look right? The balsam woolly adelgid causes gouting (Fig. 7) whereas the white pine weevil causes the shepherd's crook (Fig. 8). Winter is a good time to remove seed trees infected with the balsam woolly adelgid and to prune off white pine weevil infested shoots. When you prune off the WPW damaged shoots in the fall and winter, you will not provide any population reduction for the next spring but will improve the appearance and growth of the infested tree.



Fig. 7 Gouting caused by the balsam woolly adelgid. Low to severe damage from left to right.

Photo credit NSDNR



Fig. 8 Shepherd's crook caused by white pine weevil damage.

Photo credit Minnesota DNR

Look for Diseased Leaves or Twigs

Preferably before the snow flies, check your fallen leaves for diseased ones. The perfect example would be tar spot of maple (Fig. 9) or black knot of cherry (Fig. 10). In the case of the tar spot maple, the best advice is to rake all leaves and destroy them. For black knot cherry, pruning of the infected twig is ideal. Always use good sanitation practices, especially on your pruning tools, when removing any potentially diseased plant material.

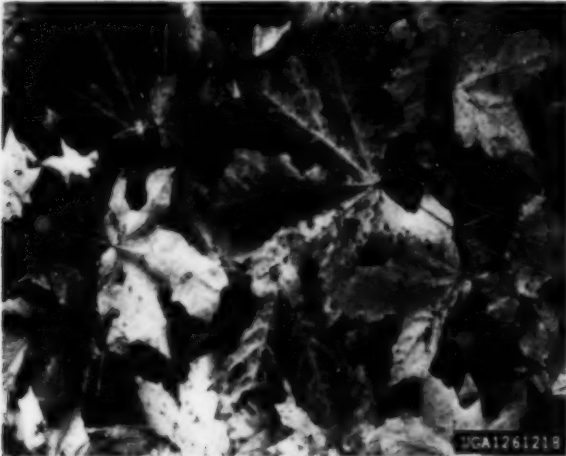


Fig. 9 Tar spot of maple.

Photo credit G. Wojciech



Fig. 10 Black knot of cherry.

Photo credit M. Schomaker

References

- Fig. 2 Forest tent caterpillar egg band. Steven Katovich, USDA Forest Service, <http://www.bugwood.org/>
Fig. 3 Balsam fir sawfly egg niches. Thérèse Arcand, Natural Resources Canada, Canadian Forest Service <http://imfc.cfl.scf.rncan.gc.ca/insecte-insect-eng.asp?geID=6564>
Fig. 4 Brown spruce longhorn beetle exit hole. Exotic Forest Insect Guidebook 2006. Tom Prest, CFIA <http://www.inspection.gc.ca/english/plaveg/pestrava/tetfus/tech/tetfuse.shtml>
Fig. 6 Spruce Beetle Galleries. Scott Tunnock, USDA Forest Service, <http://www.bugwood.org/>
Fig. 8 Shepherd's crook caused by white pine weevil damage. Minnesota Department of Natural Resources Archive, Minnesota Department of Natural Resources, <http://www.bugwood.org/>
Fig. 9 Tar Spot of maple. Gil Wojciech, Polish Forest Research Institute, <http://www.bugwood.org/>
Fig. 10 Black Knot of cherry. Mike Schomaker, Colorado State Forest Service, <http://www.bugwood.org/>

Until Next Time,

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Bits and Pieces

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Fall Clean Up

Jacqui Gordon

Raking leaves in the crisp fall air can be a good way to spend a Saturday afternoon. This is also a good way to prevent or lessen the intensity of some tree diseases in the coming spring. Tar spot of maple and leaf blotch of horse chestnut are two foliar diseases that overwinter in the fallen leaves and reinfect the trees in the spring.

The bad thing is that composting cannot guarantee the destruction of the disease causing agents so the leaves must be removed or destroyed. Although this will not completely prevent infection, it will be a good start for next spring.

Ladybird, Ladybird . . .

Jacqui Gordon

Once again ladybird beetles are looking for a place to spend the winter. The usual culprit for home invasion is the introduced Multicoloured Asian Ladybird beetle.

Although they are considered a beneficial insect because they feed on pest insects such as aphids, this introduced species makes a nuisance of itself by entering homes en masse in the fall.

Prevent them from entering by fixing broken screens and sealing cracks around windows and doors. Once inside, vacuum up any beetles and get rid of the vacuum bag. If you squash them, they will stain fabric and wallpaper and will also release a pheromone that attracts more beetles.

Two young fellows were camping out in the forest one night. But the mosquitoes were so fierce that the boys had to hide under their blankets to keep from getting bitten. Then one of the boys saw some lightning bugs.

"We may as well give up," he told his friend. "Now they are coming at us with flashlights."



Blacklegged Ticks and Hunter-killed Deer

Jeff Ogden

The Hunter-killed Deer Survey was again completed in Lunenburg County in 2009. For the first six days of rifle season Forest Health staff (me) assisted Dr. Robbin Lindsay, of Public Health Agency of Canada (PHAC), with the checking of white-tailed deer for ticks at the Lunenburg Irving Deer Registration station. Despite the large numbers of hunters, a bonus tag, and the ever present population of deer, our numbers were low. This is likely due to the convenience of the online registry as opposed to hunter success. Tick numbers on deer remain high in established areas, final results of the data are being processed.

Welcome Back

Jim Rudderham

This is the time of year in our business that we are busy. Surveys are carried out for various forest pests and the lab is running most days processing the many samples that are collected. We are again fortunate to welcome back Andrew Young and Matthew Campbell. They started with us the first week of October and will be with us until the end of March. This is the third year that they have been with Forest Health and without them it would be impossible to complete all the work that we do. On behalf of the section, we're glad to have you both back.

Andrew and Matthew can be reached at 758-7069.

Project Updates

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Jack Pine Budworm

Mike LeBlanc

Aerial defoliation surveys for jack pine budworm (JPBW) feeding damage were conducted during the month of August and two general locations were observed to contain feeding damage this year.

The first location, Fourth Lake Flowage in Digby Co., which had been hit particularly hard the last two years only sustained light damage this year. Forest Health staff collected four overwintering L-2 larvae survey points from that same area and the results show that next years' population will be substantially less, or pretty much a population collapse in the areas sampled.

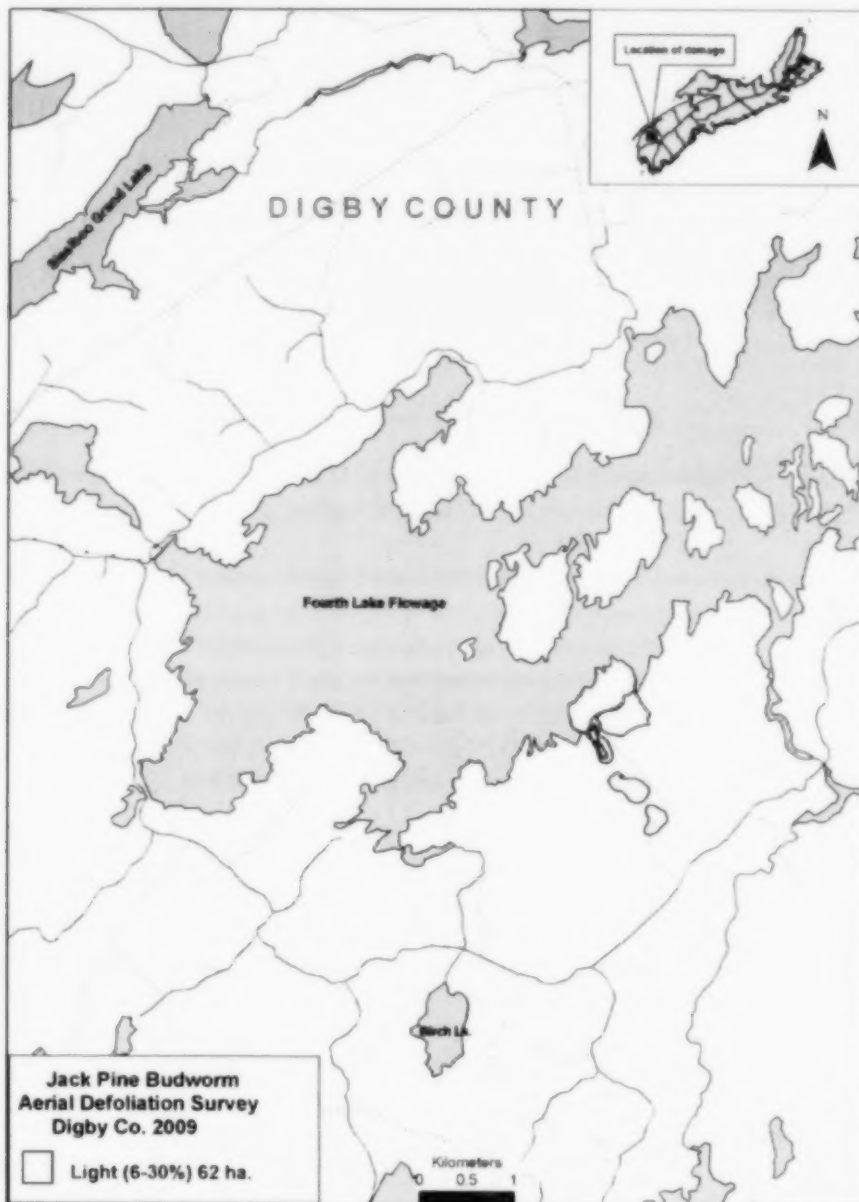


Fig. 11 Jack pine budworm aerial defoliation survey, Digby Co., 2009.

Project Updates (contd.)[Back to page 1](#)**Jack Pine Budworm (contd.)**

Mike LeBlanc

The second location, which is in the Cowie Bay-Barney Lake area of Lake Rossignol, Queens Co., are new areas of defoliation for 2009. They are in the same general area of defoliation which has occurred there since 2007. Forest Health staff will be collecting L-2 sample points from this and other areas in the near future.



Fig. 12 Jack pine budworm aerial defoliation survey, Queens Co., 2009.

Balsam Fir Sawfly

Terry White

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In early August, Chrissy Campbell reported seeing extensive defoliation in balsam fir stands in Guysborough County. With the assistance of the GPS waypoints supplied by Vince Power from DNR in Guysborough, Forest Health staff conducted an aerial survey and located the infestation which is in the New Harbour area. The results from mapping the damaged area showed an infested area of 35.5 ha. The area of infestation seemed to be concentrated along HWY 316 in New Harbour.

As for continued surveillance, Forest Health staff plans to collect branch samples from this area this year to monitor the number of overwintering eggs, which will help to determine what next year's population levels could be.

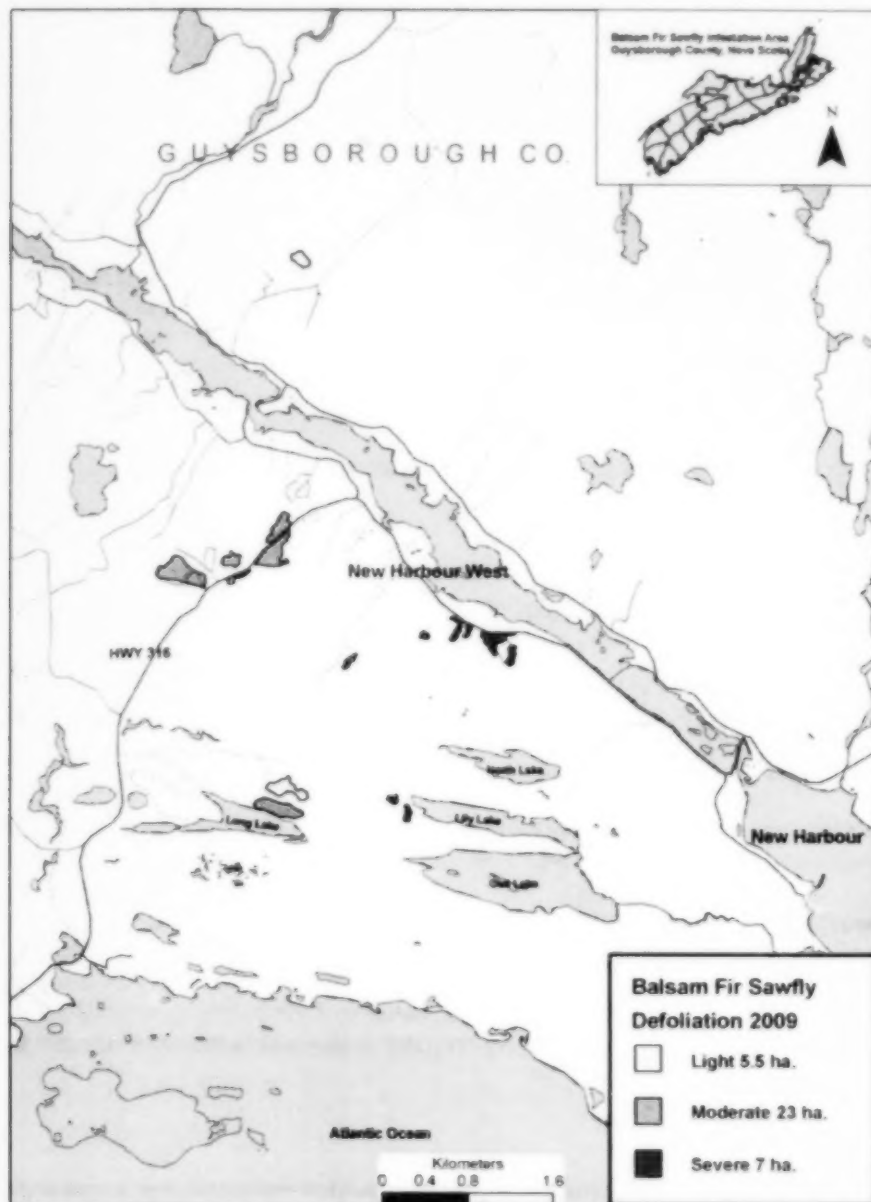


Fig. 13 Balsam fir sawfly defoliation, Guysborough Co., 2009.

THE LAST PUGH ...



An avid duck hunter was in the market for a new bird dog. His search ended when he found a dog that could actually walk on water to retrieve a duck. Shocked by his find, he was sure none of his friends would ever believe him.

He decided to try to break the news to a friend of his, the eternal pessimist who refused to be impressed with anything. This, surely, would impress him. He invited him to hunt with him and his new dog.

As they waited by the shore, a flock of ducks flew by. They fired, and a duck fell. The dog responded and jumped into the water. The dog, however, did not sink but instead walked across the water to retrieve the bird, never getting more than his paws wet. This continued all day long; each time a duck fell, the dog walked across the surface of the water to retrieve it.

The pessimist watched carefully, saw everything, but did not say a single word.

On the drive home the hunter asked his friend, "Did you notice anything unusual about my new dog?"

"I sure did," responded the pessimist. "He can't swim."

When Mozart passed away, he was buried in a churchyard. A couple days later, the town drunk was walking through the cemetery and heard some strange noises coming from the area where Mozart was buried. Terrified, the drunk ran and got the priest to come and listen to it. The priest bent close to the grave and heard some faint, unrecognizable music coming from the grave. Frightened, the priest ran and got the town magistrate.

When the magistrate arrived, he bent his ear to the grave, listened for a moment, and said, "Ah, yes, that's Mozart's Ninth Symphony, being played backwards." He listened a while longer, and said, "There's the Eighth Symphony, and it's backwards, too. Most puzzling." So the magistrate kept listening; "There's the Seventh . . . the Sixth . . . the Fifth . . ." Suddenly the realization of what was happening dawned on the magistrate; he stood up and announced to the crowd that had gathered in the cemetery. "My fellow citizens, there's nothing to worry about. It's just Mozart decomposing."



Charlie took his girlfriend to her first football game. They had really good seats, right above their team's dugout. At the end of the game, Charlie asked her if she liked it. "Yeah, it was great," she said. "I just don't get why all the fuss about a quarter!" Charlie is confused. "At the beginning of the game," she explained, "I saw the two guys flip a quarter. Then the rest of the game, all they said was: Get the quarterback! Get the quarterback! Hello! It's only 25 cents!"

The police officer got out of his car and the kid, who was stopped for speeding, rolled down his window.

"I've been waiting for you all day," the officer said.

The kid replied, "Yeah, well I got here as fast as I could."

When the officer finally stopped laughing, he sent the kid on his way without a ticket.



